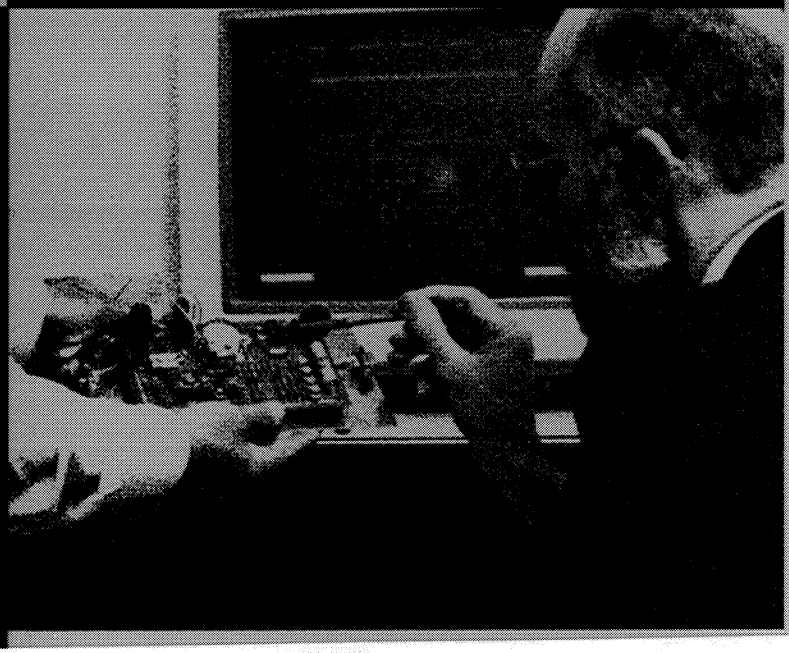
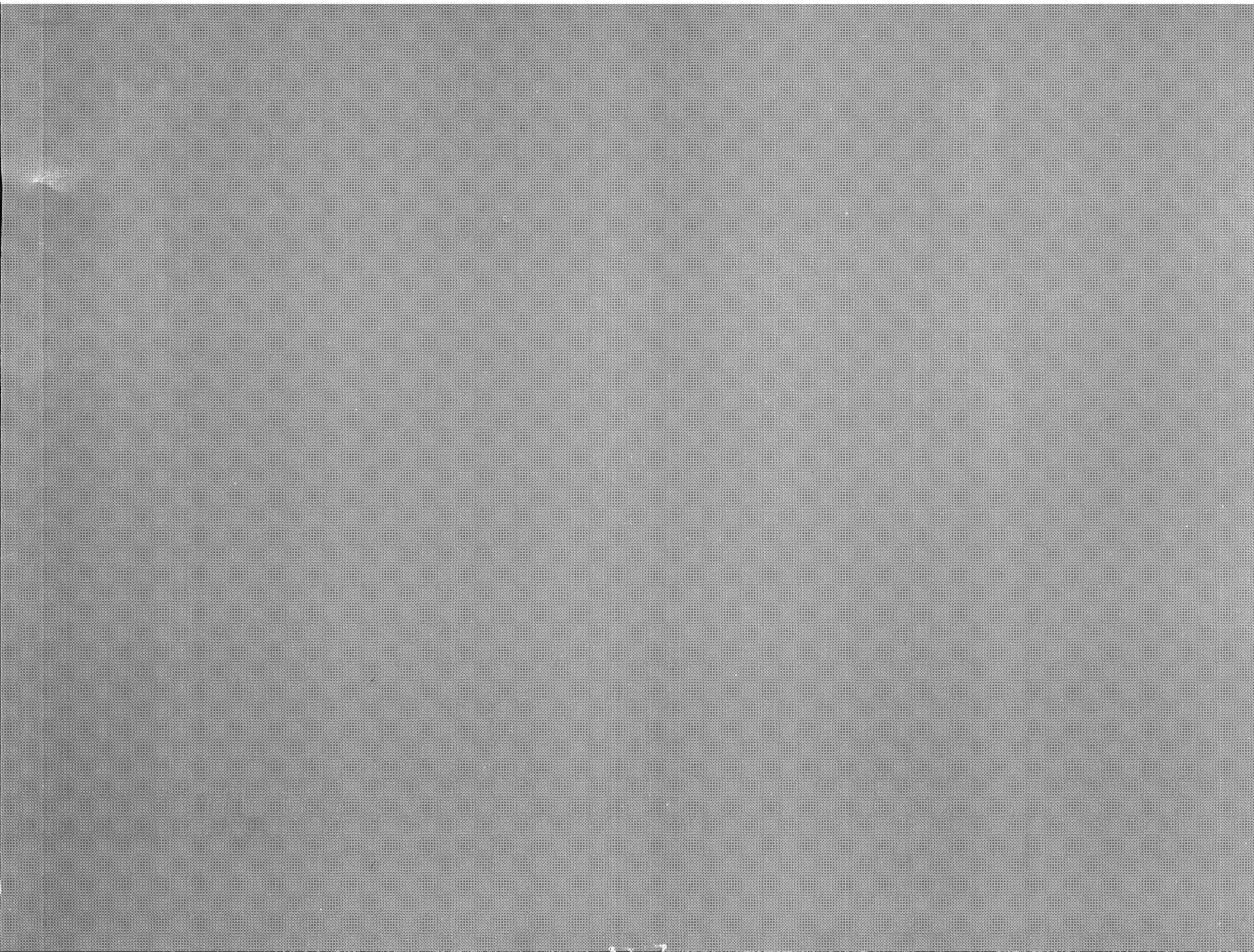
NASA TEAM EXCELLENCE

QUALITY: A COMMITMENT TO THE FUTURE





THE FUTURE IS NOW

The future is now. It is built upon accomplishments being shaped in the present. And each accomplishment is a testimony to the teamwork that starts with each NASA employee who makes a commitment to accept nothing less than excellence. Not just excellence, but NASA excellence.

Striving for and sharing this exacting level of excellence are the following NASA teams:

- NETs (NASA Employee Teams)
- JETs (JPL Enhancement Teams)
- Quality Circles
- Integrated Teams (NASA/Contractor teams)
- Employee Involvement Teams
- Excellence Teams
- Task Teams

It is the mission of these teams to "support NASA's goals of continuous quality and performance enhancement through structured, organized teams dedicated to improving the quality of products and services and team excellence."

The following NASA Excellence Principles, which stress employee involvement, are the foundation for the teams.

- Entrust responsibility and authority to the lowest practicable operating level in order to encourage initiative and pride and to minimize bureaucracy and paperwork.
- Encourage honest, open, and frequent two-way communication on all matters.
- Hire a high-quality and integrated work force, provide an opportunity for creative and productive work, and maintain a positive climate for personal development and career growth.
- Encourage those responsible for carrying out the work to make suggestions for improvement and participate in the planning.

A typical team:

- Is composed of personnel with common work interests who through teamwork improve organizational effectiveness.
- Uses consensus for win-win decisions.
- Has a leader and is assisted in team effectiveness by a facilitator.
- Uses structured processes and techniques for group problem solving.

The teams span the entire NASA community, in all areas of endeavor, as they work to enhance job effectiveness, efficiency, safety, and cost savings. Their efforts are sparked by an unwillingness to accept yesterday's level of achievement. And their vision, commitment, and persistence forge invaluable results for NASA's future.

Ames Scientists – Space Science Directorate

Earthquake preparedness was a vital concern for the team, which investigated possible problems if staff personnel were stranded at work following a major quake. The solution included storing three days' worth of emergency supplies (food and first aid) for the 75 Space Science Building occupants.

Impact/Benefit:

- Made arrangements to cope with a major natural disaster

NETs have proven successful for they provide a method to improve the workplace.

Robert Allen
Supervisor,
Ames Research Center

The people doing the work are the ones best qualified to identify and accomplish improvements in the workplace. That's why employee teams like NETs are effective and why leaders who listen have an easy time implementing change.

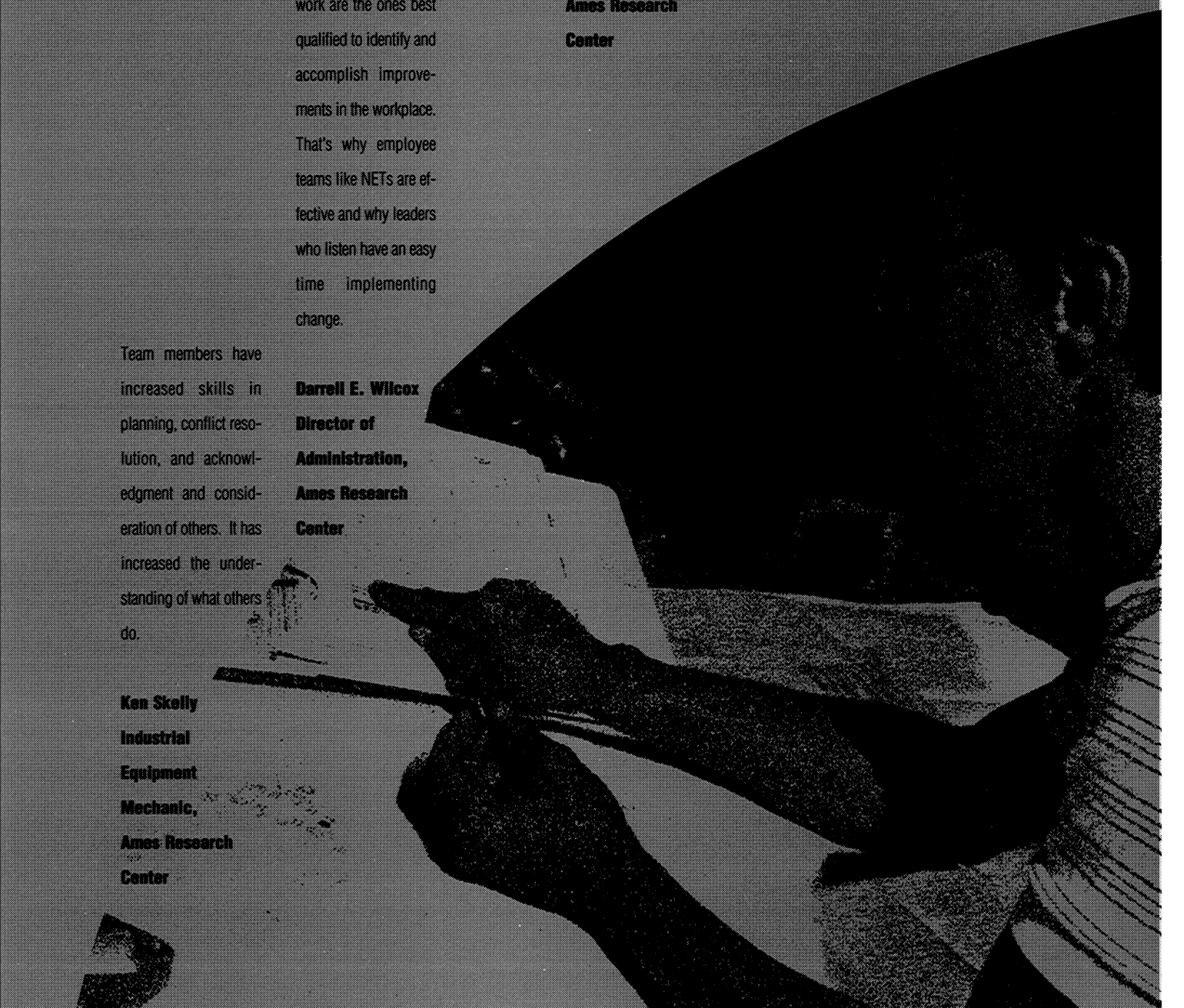
Darrell E. Wilcox
Director of Administration,
Ames Research Center

Team members have increased skills in planning, conflict resolution, and acknowledgment and consideration of others. It has increased the understanding of what others do.

Ken Skelly
Industrial Equipment Mechanic,
Ames Research Center

The program has provided a forum (that otherwise does not exist) that allows me to meet and exchange ideas with my co-workers. My time as a leader has allowed me to develop and improve on my meeting leading skills.

Dee Morrison
Contract Specialist,
Ames Research Center



Goddard Computer Specialists and Scientists – Science Information Systems Center (SISC)

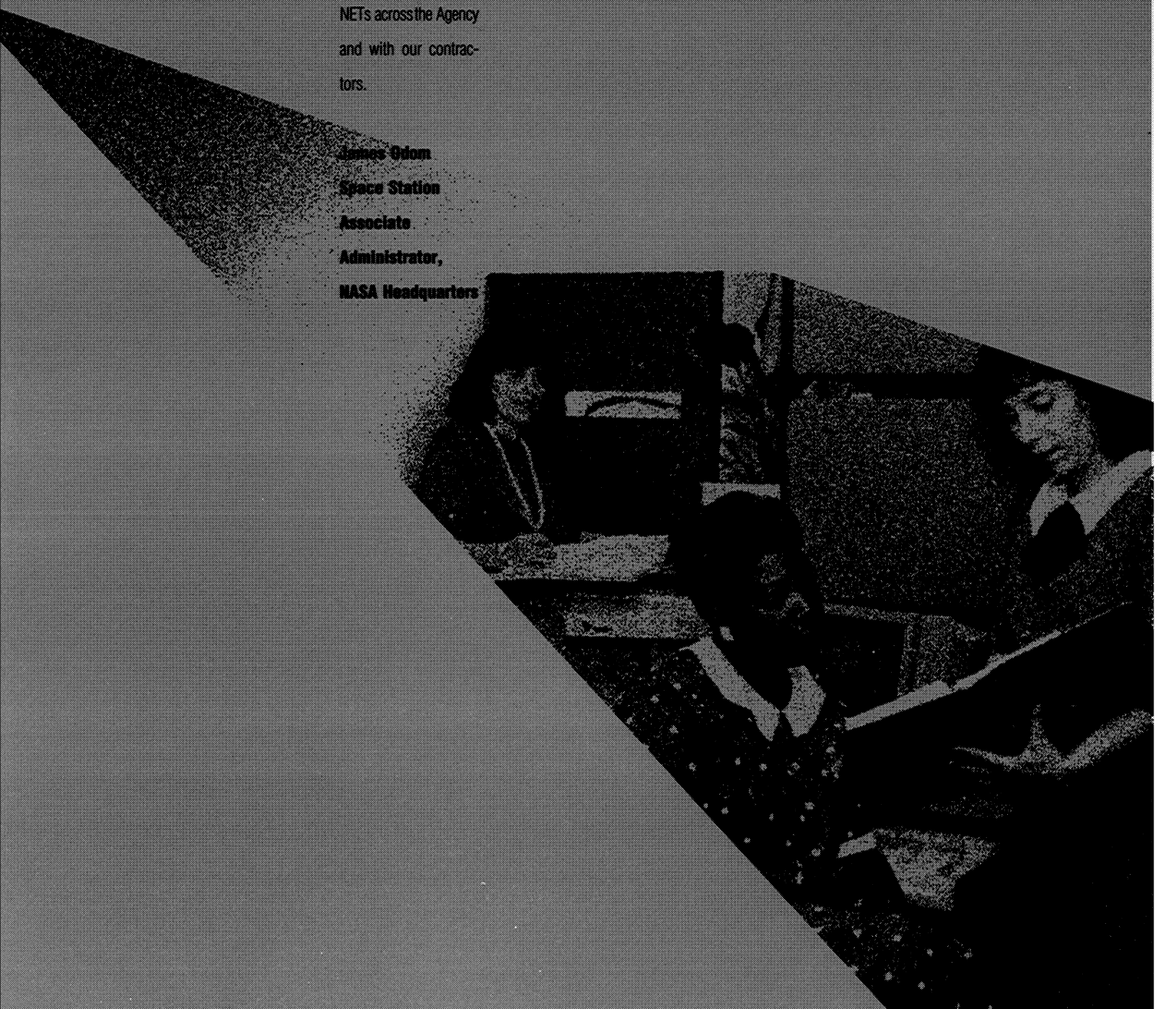
The team initially intended to locate a word processing program that would serve the diverse needs of the engineers and scientists in SISC. In the process, a related problem became apparent in that scientific papers were typed twice, once by the author and then by the secretary, because of incompatible software and equipment. The team expanded the scope of its project to address the compatibility issues.

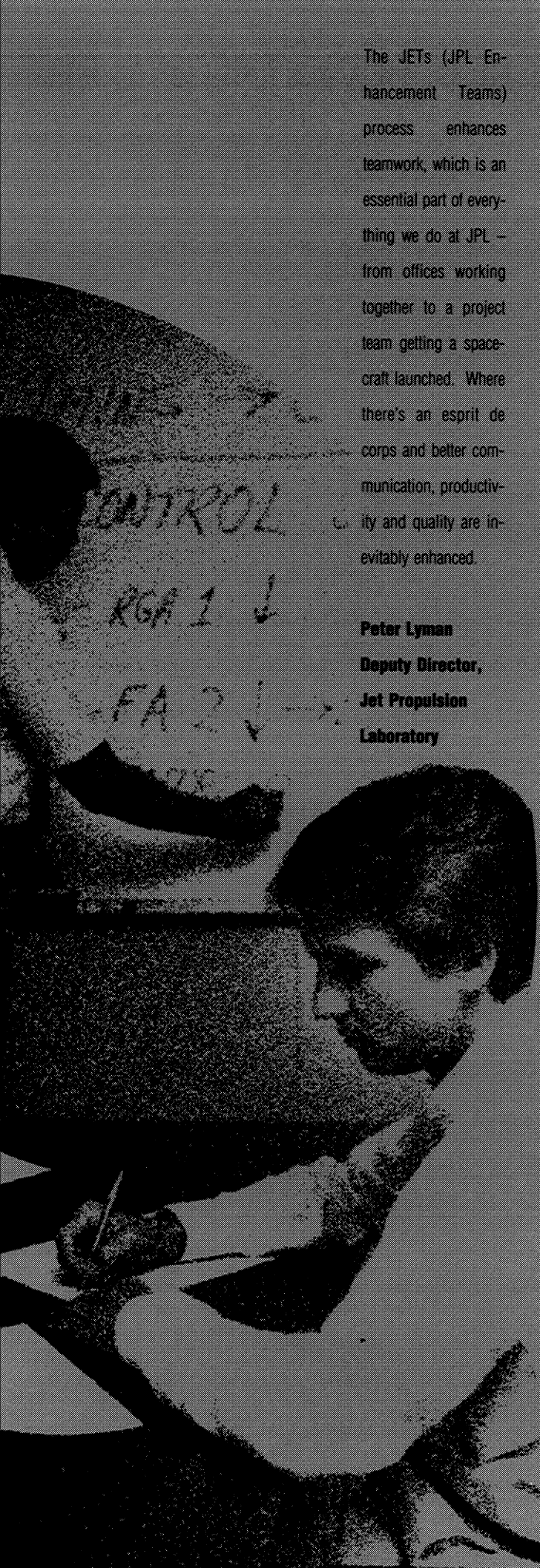
Impact/Benefit:

- Achieved efficiency through standardization

Over the past several years, I have had excellent personal experience with NETs, both in the industrial environment and the NASA environment. The return on investment has been exceptional in almost all cases. I anticipate that NASA will continue an aggressive program in support of NETs across the Agency and with our contractors.

James Odom
Space Station
Associate
Administrator,
NASA Headquarters





The JETs (JPL Enhancement Teams) process enhances teamwork, which is an essential part of everything we do at JPL – from offices working together to a project team getting a spacecraft launched. Where there's an esprit de corps and better communication, productivity and quality are inevitably enhanced.

Peter Lyman
Deputy Director,
Jet Propulsion Laboratory

I learned to listen to my people's ideas better, and I think that makes me a better supervisor. They have learned to speak freely with me and with each other.

The cooperation they experience during the JET meetings spills over into their normal work relationship. We work so much better as a team.

Lee Laurel
Financial Reports Group Supervisor,
Jet Propulsion Laboratory

We can now do more sophisticated designs and analyses, and do them accurately and more quickly as the result of the tool selected by the JET. What's important is that the team members, who are the design engineers, have ownership of the tool. With this JET, we have improved our Section's capability and productivity by orders of magnitude.

Kenneth Atkins
Electric Power Systems Manager,
Jet Propulsion Laboratory

Jet Propulsion Laboratory Engineers – Electric Power Systems Section

To switch from manual to computer-aided design of spacecraft power systems, the team examined its design and analysis needs and created a CAD/CAM Workstation to perform power electronics analysis more efficiently.

Impact/Benefit:

- Achieved more complete design and faster response in verification and development of control loops and worst-case analysis

JPL Secretaries – Telecommunications and Data Acquisition (TDA) Organization

Dissatisfied with the failing hardware of a dedicated word processing system and increased downtime, the team selected a system of personal computers for all 14 TDA secretaries.

Impact/Benefits:

- Achieved equipment compatibility for the entire staff
- Provided access to electronic mail
- Provided stand-alone flexibility
- Saved $27.000 by not upgrading the existing word processing system

Johnson Space Center
Machinists – Machine Branch

A team of machinists developed a Machine Shop Manual because information on procedures was located in various areas and much of the information was difficult to read. The handy new reference manual covers both routine and infrequently used procedures and also includes many techniques and unique methods developed by master JSC machinists.

Impact/Benefits:

- Achieved more efficient and productive use of the machinists' time
- Captured special techniques and methods devised by experienced personnel. (Previously, these ideas were lost when people retired.)
- Established a training reference for new machinists that has been shared with other Centers and is presently used as supplementary material by Langley Research Center in its apprentice training

Johnson Space Center
Engineers and Rockwell, McDonnell Douglas, and U.S. Air Force Personnel – Flight Training Branch

Astronaut flight training scripts take the crew through approximately 1,000 objectives on Shuttle Mission Simulators (SMSs) and were extremely time consuming to develop. Instructors typically spent 15% of their time each week producing these scripts, which represented a continual "reinvention of the wheel." The team made training preparation more efficient by establishing a database of standardized scripts that also provided instructors with a systematic and coordinated procedure to achieve the SMS objectives.

Impact/Benefits:

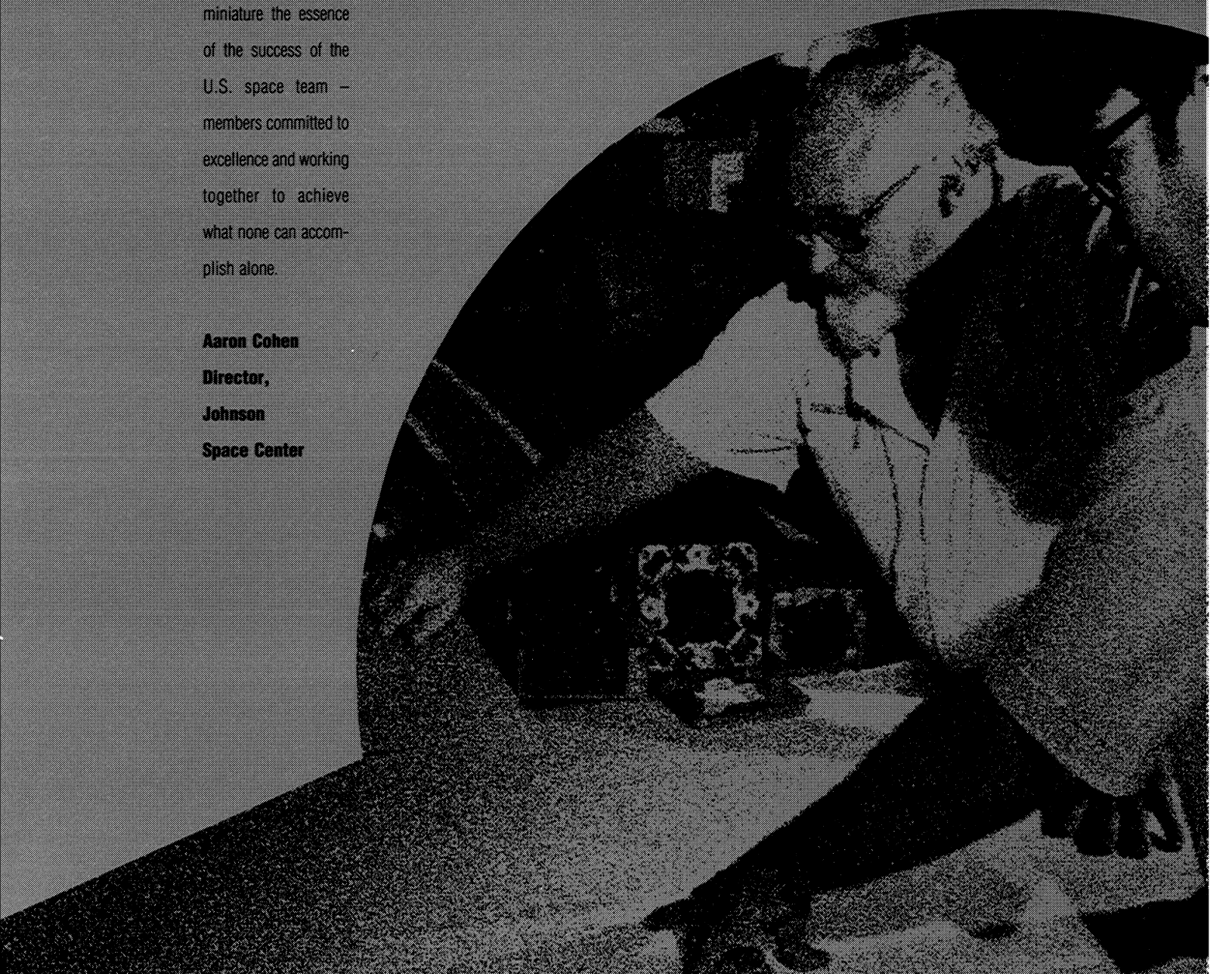
- Accommodated an increased flight rate demand (from 148 to 160 hours per week)
- Increased productivity for trainers both on and off console
- Enhanced instructor and crew training

NETs capture team spirit – they harness team energy. Individuals from within and across organizations join forces – barriers are bridged – efforts are concentrated on getting the job done in the very best way. NETs represent in miniature the essence of the success of the U.S. space team – members committed to excellence and working together to achieve what none can accomplish alone.

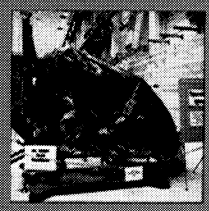
Aaron Cohen
Director,
Johnson
Space Center

NETs enhance our work and ourselves. The process is simple and effective. I'm proud to be part of the process.

Roberta Dorgan Beckman
Team Leader,
Johnson
Space Center



The next decade promises to be an exciting and demanding period for NASA as the Agency focuses on establishing a viable Space Transportation System operational capability and on achieving the reality of the Space Station Program. NASA Employee Teams (NETs) and Kennedy Integrated Teams (KITs), which expand the concept to integrated NASA/industry teams, have proven to be effective ways employees can work together through teamwork to achieve high levels of excellence, productivity, quality, and job satisfaction throughout KSC. The future is built on teamwork!



Forrest McCartney
Center Director,
Kennedy
Space Center

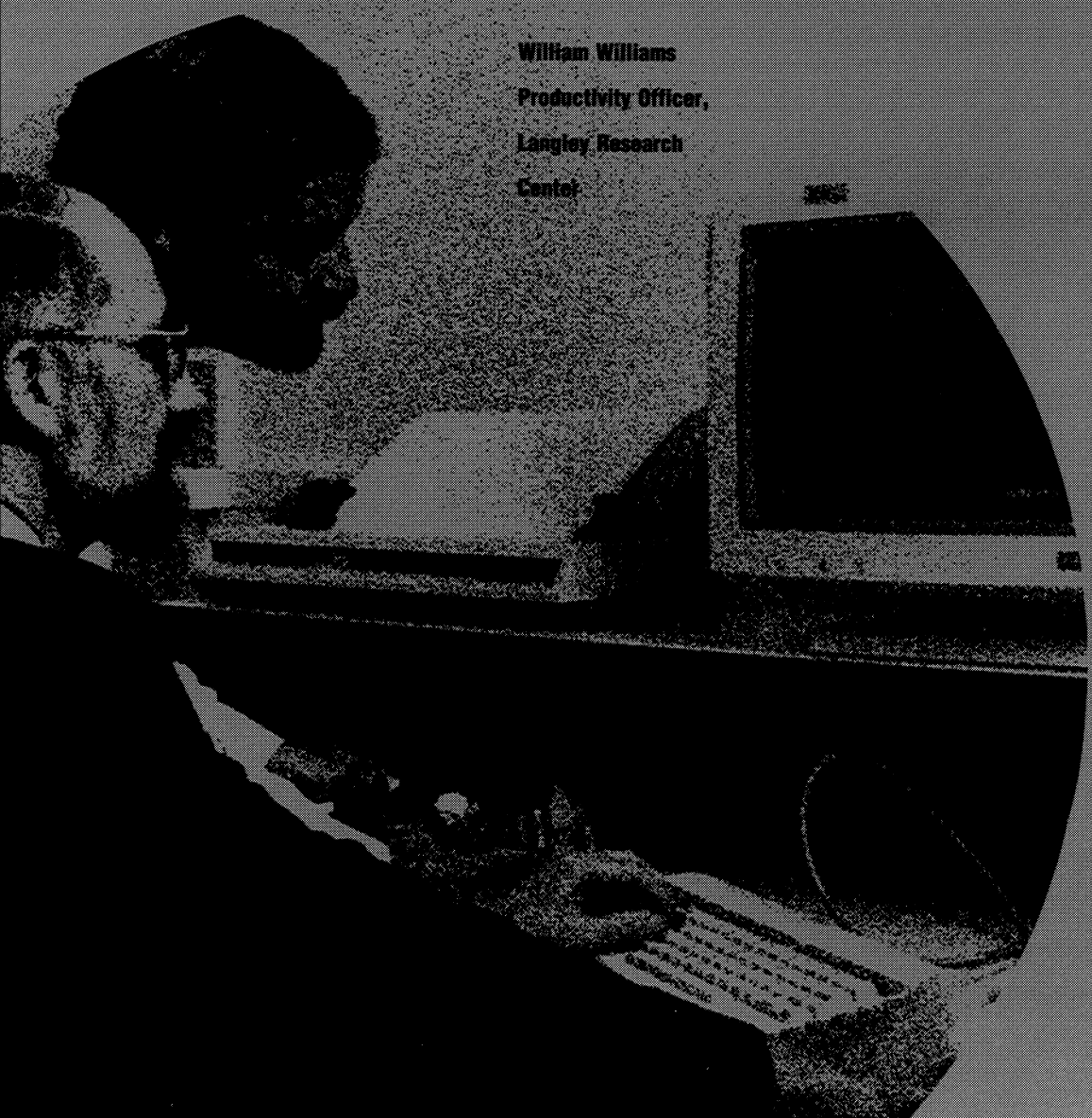
Kennedy Space Center Engineers and Aerospace Corporation, Ebon, Lockheed Space Operations Company, Martin Marietta, McDonnell Douglas Astronautics Company – Florida Test Center Division, and Rockwell Personnel

The team developed a standard for testing and acceptance of plastic films used for debris shields and dust covers for payloads, parts packaging, and hardware handling. The team is now testing films for various uses against these standards. (At least three manufacturers are actively formulating films to meet the standards developed.) Before the standards were adopted, the database for plastic films was scattered and not uniform, making selection of the right film for the right purpose difficult.

Impact/Benefit:

- Saved at least $30,000 per vehicle flow for Shuttle processing in the Orbiter Processing Facility by matching film to an appropriate use

Langley's Quality Circles have provided a solid foundation for the Center's Productivity Program. We will soon have six years of practical experience, lessons learned, and a record of contributions. For Langley to have been recognized as a finalist in the recent U.S. Senate Productivity Award was in part due to the importance of employee involvement activities such as Quality Circles. Drawing from the momentum of our circles, the Center will develop additional employee involvement teams.



William Williams
Productivity Officer,
Langley Research Center

Everyone comes out ahead. Workers are able to convey their concerns and suggestions to management. Management benefits from the synergistic effect of the members' combined problem-solving efforts. NASA, in general, profits immensely from the ideas and solutions generated by the teams. In every aspect, the Quality Circles Program at Langley is a winner.

Stanley Ward
Team Leader,
Langley Research Center

Langley Research Center Secretaries, Clerks, and Specialists – Personnel Division

The team improved the system of processing new employees. Procedures were updated, slide presentations were consolidated onto a video with a welcoming segment by the Center Director, dead time between various orientation activities was eliminated, the employee orientation packet was refined, temporary badges were prearranged, and supervisors or worksite representatives were identified to take new employees to their job sites at the end of the program.

Impact/Benefits:

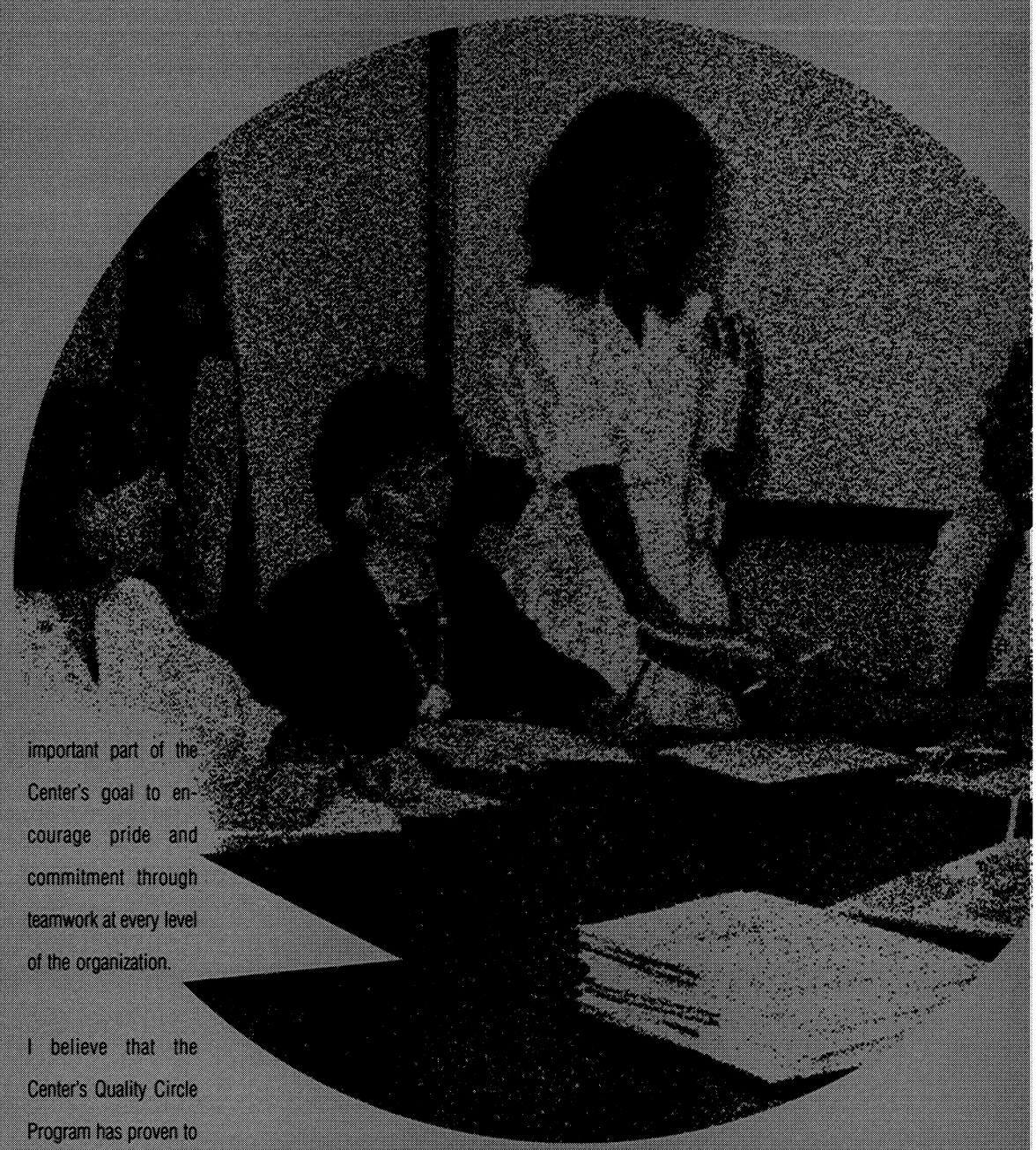
- Reduced time for processing new employees by 20%
- Reduced workload of individual specialists
- Provided a more organized, efficient, and professional orientation program
- Conveyed a better impression of Center operations to new employees

Lewis Research Center Specialists – Personnel Division

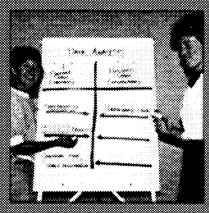
A team of specialists representing varied functions in the Personnel Division was charged with creating a vision of future performance for the Division.

Impact/Benefits:

- Improved communication between branches
- Established customer-oriented assignments and performance elements
- Offered on-site training in all areas to enhance cross-functional capabilities
- Increased use of cross-functional teams throughout the Division



Four years ago we initiated a Quality Circle Program that was aimed at supporting our overall efforts to develop a more participative environment at the Center. We have watched as our concept of Quality Circles took hold and became an important part of the Center's goal to encourage pride and commitment through teamwork at every level of the organization.



I believe that the Center's Quality Circle Program has proven to be a cornerstone in promoting teamwork and participative management skills that will continue to be a way of life at Lewis now, and into the future.

John M. Klineberg
Director,
Lewis Research Center

Marshall Space Flight Center Engineers – Structures and Dynamics Laboratory

Employees, both old and new, sometimes had difficulty locating technical information and knowledgeable individuals who could be of assistance to their projects. The team implemented a computerized database that includes individual employee skills, a "Tech Bulletin Board," and a hardware inventory. Information on the database is an integral part of new employee orientation in the Science and Engineering Directorate.

Impact/Benefit

- First-year cost savings due to efficient search for information are estimated at $192,000 in the Structures and Dynamics Laboratory

Marshall Space Flight Center Engineers – Information and Electronic Systems Laboratory

Procedures for buying low-cost emergency parts were costly and time consuming, leading to inefficiencies in design and development activities. A 13-step procedure was revised to four steps for the procurement of only non-ADP, non-quality-sensitive, and locally available parts.

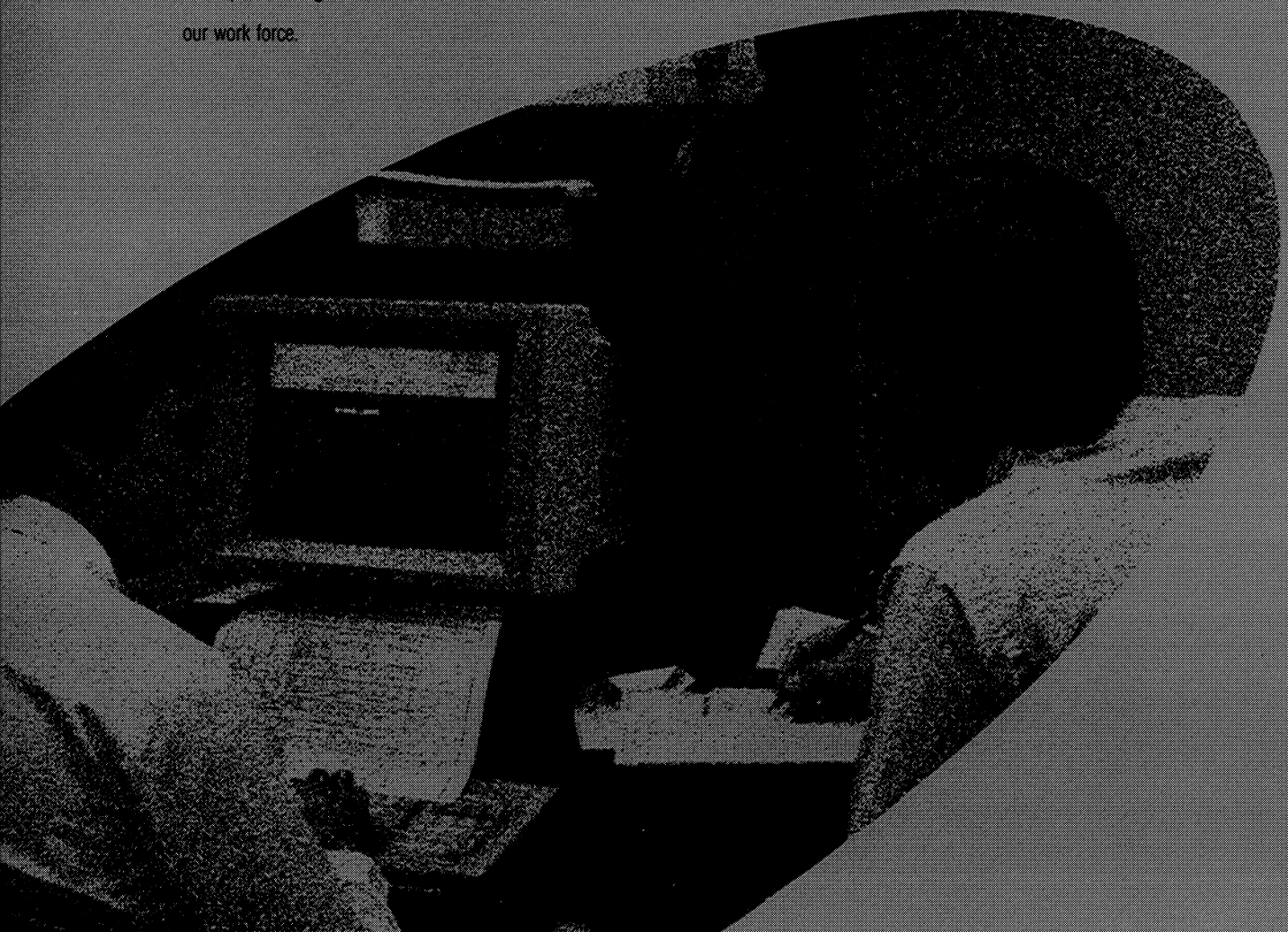
Impact/Benefits:

- Established a more efficient means to obtain emergency items
- Reduced chances of purchasing the wrong item
- Reduced waste by eliminating the tendency to over order
- Reduced workload of the Procurement Office, which increased time for large procurements
- Saved an estimated administrative cost of $244,000

Employee involvement is a key factor in improving quality and productivity. The NETs/JETs team approach to problem-solving encourages innovation and reveals talents which otherwise might go untapped. This type of employee participation leads to improved quality and greater individual and institutional pride throughout our work force.

Our teams are to be commended. Their many contributions toward meeting the agency goals and objectives truly demonstrate a commitment to excellence.

Joyce R. Jarrett
Director,
Quality
and Productivity
Improvement
Programs,
NASA Headquarters



The NET process has opened doors of communication between all levels of the work force. It has provided ideas that have not only strengthened the current mode of operation, but laid a solid foundation for future projects.

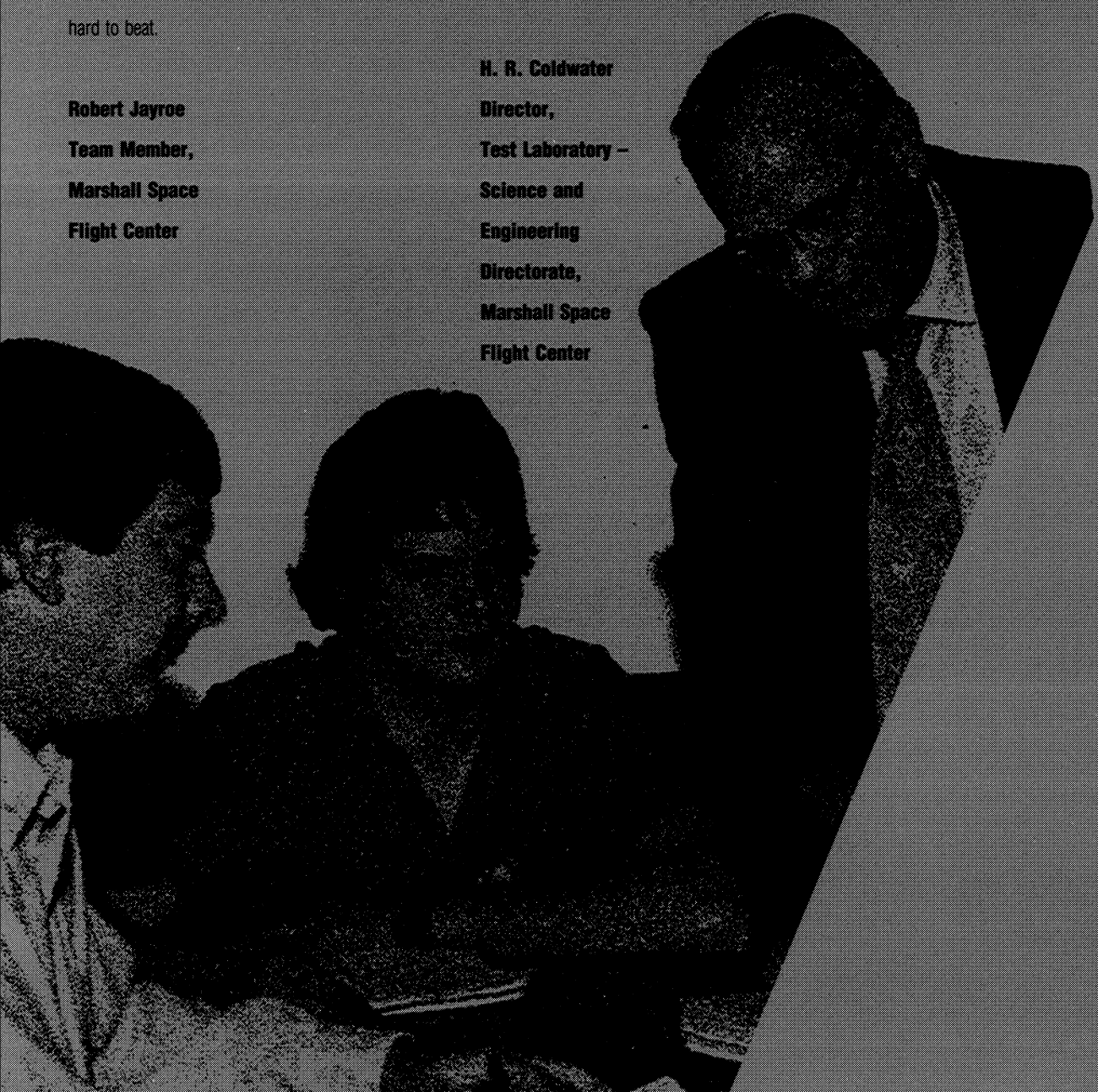
Rosa Kilpatrick
Team Leader,
Marshall Space Flight Center

Working with a team is an exciting personal growth experience; but when the team completes a project, there is a shared sense of accomplishment and comradeship that is hard to beat.

Robert Jayroe
Team Member,
Marshall Space Flight Center

NETs have proven to be an important avenue in identifying impediments to improved productivity. Recommendations from the NETs home in on problems and solutions and are effective in removing impediments. I highly endorse NETs . Their continued operation will measurably contribute to the success of MSFC operations.

H. R. Coldwater
Director,
Test Laboratory – Science and Engineering Directorate,
Marshall Space Flight Center



The NET process is a winner. It allows employees to search for excellence through participation.

The NET process promotes cooperation and communication among team members because they are working toward a common goal. The team process represents employees who care enough to get involved. It stimulates new and innovative ideas. It taps our greatest resource – people. People take us to space and they are going to keep us there. Our machines and instruments are only tools, but people do the job.

J. R. Thompson
Center Director,
Marshall Space Flight Center

John Stennis Space Center Managers and Pan Am World Services, Inc. Management

A combined team of NASA and contractor middle managers worked on management issues that included an update of the Center's critical systems list, contractor and NASA training, and more effective meetings.

Impact/Benefits:

- Improved NASA/contractor communication
- Facilitated resolution of problems requiring matrix-type approvals
- Allowed middle management to have direct impact on critical problems

The NASA investment in quality teams has long-term as well as short-term payoffs. Long-term benefits are improved teamwork; increased cooperation, communication, initiative, pride, and employee involvement; and individual employee development. The short-term benefit is that teams can raise a service or product to a new level of quality. Both returns on investment are valuable because NASA missions are group efforts and because our future depends on excellence in the present.